



March 22, 2009

To: Scientific Discovery through Advanced Computing (SciDAC)
Office of Science
U.S. Department of Energy

From: Dean N. Williams
Lawrence Livermore National Laboratory
Program for Climate Model Diagnosis and Intercomparison
Mail Stop: L-103
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Livermore, CA 94550

Re: Letter of Support for "Visualization and Analytics Center for Enabling Technologies (VACET)"

To Whom It May Concern:

As the PI of the SciDAC Earth System Grid Center for Enabling Technologies (ESG-CET), I am writing this letter to express my enthusiastic support for the activities concerning the "Visualization and Analytics Center for Enabling Technologies (VACET)". The work that the VACET team is undertaking directly benefits the ESG-CET project as well as other DOE funded programs – as it addresses some of the most challenging data visualization and analytics issues facing the climate community.

In my role as PI, I am responsible for a large multi-institutional team focused on the mission of providing climate researchers worldwide with access to distributed data, information, models, analysis tools, and computational resources required to make sense of enormous climate simulation datasets. From the start of our project, our team has been collaborating with VACET researchers to add new functionalities to our data management and visualization infrastructure. This collaboration has allowed us to introduce a completely new family of 3D visualization features that are based on ViSUS and respect our Python scripting infrastructure. In addition to the new visualization features, the ViSUS infrastructure allows us to enable external memory data processing capabilities with which we can explore interactively large datasets. Currently, we are in the process of deploying the ViSUS extensions as part of the Climate Data Analysis Tools (CDAT) 5.1 release.

The collaboration with the VACET team is also providing us with a new tool, called VisTrails, which captures full provenance of the data analysis and visualization process. This new technology will be extremely useful to climate scientists since it will allow them to share not only the data generated by their simulations but also the scripts representing the sequence of processing steps encoding their data analyses.

In conclusion, our collaboration with the researchers of the VACET team has been very useful and we are committed to continue this partnership in the future. The tools provided by the VACET team will prove very useful for climate scientists and are allowing us to make progress towards an infrastructure for the exploration and understanding of petascale scientific data.

Sincerely,

Dean N. Williams
PI, Earth System Grid Center for Enabling Technologies
Program for Climate Model Diagnosis and Intercomparison
Lawrence Livermore National Laboratory